

ABSTRACT OF THE DISCLOSURE

Hybrid sol-gel materials are provided, which may be produced by the reaction of an alkyl or dialkyl substituted trialkoxysilane or dialkoxysilane reacting with a silane diol, wherein said alkyl group has from 1 to 8 carbon atoms. A process is also provided for patterning the sol-gel spin-on glass material by: a) coating a substrate with the spin-on glass material; b) exposing the coated substrate of step a) to UV illumination in a desired pattern; c) post-exposure baking the coated substrate of step b) at a temperature from 100 °C to 120 °C for 30 to 60 minutes; d) cooling the coated substrate of step c) to room temperature; e) removing the non-exposed areas of the coating on the coated substrate of step d); f) drying the coated substrate of step e); g) hard baking the coated substrate of step f) at a temperature from 120 °C and 150 °C for 1 to 3 hours.